

Response to Arguments

Applicant's arguments filed February 26, 2008 have been fully considered but they are not persuasive.

1. Applicant argued that Agrawal does not disclose maintaining a binding update while connected to a home network. However, in the process of roaming, Agrawal notes that a mobile unit maintains a binding list with correspondent nodes it is currently communicating with so that it may send binding updates when it roams to a new network (col. 3, lines 57-62).
2. Applicant argued that Agrawal does not provide motivation to maintain a binding update list when at its home network. However, the mobile unit maintains a list for nodes it is currently communicating with (col. 3, lines 57-62), which allows less processing at the home agent (col. 3, lines 60-62). In view of the new rejection below using a KSR rationale and in view of Gwon, it would have been obvious to maintain the binding update list while in the home network.
3. Applicant argued that Agrawal in view of Sorenson and Malki does not provide maintaining a binding update list while in a home network. However, Agrawal provides a teaching and motivation for a mobile unit to maintain a binding update list while residing in its home network as noted in paragraph 1 above. Examiner notes that the Malki reference provides a teaching of sending a binding update when changing routers to a foreign network in the communication system. In addition, newly cited references, Shimizu (US 2002/009066; fig. 9, periodic binding updates) and Zheng (US 2002/009066; para. 16) each provide sending binding updates in order to keep track of the position of a mobile terminal for routing efficiency.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 16, 19-20 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (US 6,992,995) in view of Gwon (US 2003/0016655), Sorensen (US 2002/0061009), Lueng (US 6,959,341) and Abrol (US 2002/0068570).

4. Regarding claims 16, 19-20 and 24-26, Agrawal discloses maintaining by a mobile node a binding update list of correspondent nodes for which the mobile node is communicating (col. 3, lines 57-62). The binding update includes care-of-address of the mobile node. However, Agrawal does not specifically disclose that the binding update list is maintained when at the home network of the mobile node. Although, Agrawal notes that the list is used to notify correspondent nodes when the location of the mobile node changes (col. 3, lines 57-62) and that the list is for current correspondent nodes. Therefore, it would have been obvious to one skilled in the art at the time the invention was made for a mobile node to maintain a binding update list at a home network in the invention of Agrawal because one skilled in the art would recognize the predictable result that a mobile node retaining a list of correspondent nodes while temporarily at the home network allows the mobile node to later notify the correspondent nodes when it again leaves the home network (col. 3, lines 57-62; Gwon, para. 54, lines 13-24; note: in Gwon the mobile node leaves the home network and sends a binding update to the correspondent nodes; see *KSR Int'l Co. v. Teleflex Inc.*, 2007).

5. Further, Agrawal does not disclose a mobile gateway router. Sorensen discloses an ad hoc mobile gateway router (fig. 2; para 24, lines 4-7). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have mobility for a mobile gateway

router in the invention of Agrawal in order to provide movable network interfaces or gateways such as within a car, bus or airplane as is known in the art (Lueng, col. 3, lines 41-50).

6. Further, Agrawal discloses maintaining a binding list for nodes in communication. Although Agrawal does not disclose initiating a communication with a correspondent node to create a binding list. Abrol discloses initiating communication with a correspondent node (para. 31). Therefore, it would have been obvious to initiate communication with correspondent node in the invention of Agrawal in order to communicate first with a destination (Abrol, para. 31; note: communication with a web server).

Claims 41, 43 and 46-47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (US 6,992,995) in view of Gwon (US 2003/0016655), Sorensen (US 2002/0061009), Lueng (US 6,959,341), Abrol (US 2002/0068570) and Zheng et al. (US 2002/0150062).

7. Regarding claims 41 and 46-47, Agrawal in view of Gwon, Sorensen, Lueng and Abrol discloses a method of operating a mobile node as disclosed in the rejection of claim 16 above. Further regarding claim 48, However, the combination of references does not disclose sending a binding update when at the home network. Although the combination of references suggests maintaining a binding list while the mobile node is at its home network. Further, Zheng discloses sending a binding update when a mobile node changes its position (para. 16, lines 1-5). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to send binding updates when located in a home network in the invention of Agrawal in order to continually maintain efficient routing between a correspondent node (para. 16, lines 1-5).

8. Regarding claim 43, Agrawal discloses maintaining by a mobile node a binding update list of correspondent nodes for which the mobile node is communicating (col. 3, lines 57-62). The binding update includes care-of-address for the mobile node. However, Agrawal does not specifically disclose that the binding update list is maintained when at the home network of the mobile node. Although, Agrawal notes that the list is used to notify correspondent nodes when the location of the mobile node changes (col. 3, lines 57-62) and that the list is for current correspondent nodes. Therefore, it would have been obvious to one skilled in the art at the time the invention was made for a mobile node to maintain a binding update list at a home network in order to provide location changes to respective correspondent nodes when the mobile nodes leaves the home network (Agrawal, col. 3, lines 57-62).

Claims 28-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal in view of Gwon, Sorensen and Lueng as applied to claim 16 above, and further in view of Malki et al. (US 2001/0046223).

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal in view of Gwon, Sorensen, Lueng, Abrol and Zheng, as applied to claim 41 above, and in further view of Malki et al. (US 2001/0046223).

9. Regarding claims 30-39, Agrawal does not disclose detaching from the mobile gateway router, attaching to a second mobile gateway router and sending binding updates. Malki discloses choosing a new mobility point and sending binding updates (fig. 7, steps 710, 720 and 760) to correspondent nodes of a binding update list (para. 32, lines 18-19). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to self-register the mobility of a mobile node with a home agent in the invention of Agrawal in order to enhance

mobility registration by controlling network messages by the mobile node (Malki, para. 54, last nine lines) and provide for free movement within a communications system (para. 4, lines 1-5).

10. Regarding claims 28-29, 40, and 45, Agrawal does not disclose generating a binding update in response to a tunneled packet or identifying a packet received from a correspondent node. However, Malki discloses a mobile node sending a binding update in response to a tunneled packet from a correspondent node or home agent of the mobile node (para. 50; fig. 10, steps 1010, 1020 and 1040) and identifying that a packet was received from a correspondent node without traversing the home agent (para. 50; fig. 10, steps 1010-1030). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to send a binding update in response to a tunneled packet or identify that a packet was received from a correspondent node without traversing the home agent in the invention of Agrawal in order to efficiently route packets to the mobile node (Malki, para. 50).

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (US 6,992,995) in view of Gwon (US 2003/0016655), Sorensen (US 2002/0061009), Lueng (US 6,959,341), Abrol (US 2002/0068570) and Zheng et al. (US 2002/0150062), as applied to claim 43 above, and in further view of Inoue et al. (US 2002/0191576).

11. Agrawal does not disclose a mobile gateway router or using a care-of-address of the router. Inoue discloses using the care-of-address of a mobile router (para. 26). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a care-of-address of a mobile gateway router in the invention of Agrawal in order to communicate with the mobile unite after it has roamed (Inoue, para. 26).

Claim 48 is allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimizu et al. (US 2002/0009066) discloses sending periodic binding updates (fig. 9, last steps).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild, can be reached at 571-272-2092. The centralized fax number for the

Patent Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

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/Kevin C. Harper/

Primary Examiner, Art Unit 2616

October 25, 2008